

## Research: the opportunity wheel keeps turning

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Last week, a twenty-eight-year-old clinician came to our library to be oriented. She wanted to know what was available online and pulled out her iPhone from her lab coat pocket. She wanted me to show her the applications she needed not only to access clinical and drug information, but also to access our other library resources, including online journals and information databases. It was clear she had no plans to come to the library ever again nor to sit at her computer in her office looking for information. This jolted me once more into recognition of how our health sciences librarianship field is changing. This clinician is not alone. More than 70% of physicians are now using smart phones, and the number is increasing [1]. We can expect many, if not most, will want to use their smart phones as their standard portal to the medical library.

Of course, this is not surprising. As a profession, we have anticipated changes: changes in how information is supplied to us and how we supply it to our patrons. And change always presents research opportunities. The Medical Library Association (MLA) has set priorities to address our changing professional environment and its opportunities for research. The latest list was set in 2008 by the MLA Research Section Research Agenda Committee. The 2008 research list built on MLA's history of research interest.

MLA issued its first research policy, *Using Scientific Evidence to Improve Information Practice*, in 1995 [2]. This was about the same time that evidence-based practice began in the field of medicine, when the value of applying evidence from outcomes research to improve treatment was recognized. The importance of making decisions based on evidence from outcomes research began to be recognized in other job fields, and the same principles were applied to library

services. MLA's 1995 policy was a commitment to foster research by the membership and specifically to build a foundation of evidence, according to at least one observer [3].

Ten years later, in 2005, an MLA task force reviewed and updated the 1995 research policy. This task force conducted semi-structured interviews with information professionals and library students from various libraries to gain views of what MLA's role should be in research. This produced a revised and updated research policy, *The Research Imperative*, which was presented to the MLA Board of Directors in 2007 [4].

Suzanne Grefsheim, FMLA, and colleagues described this task force's approach and its research in the *Journal of the Medical Library Association (JMLA)* the following year, 2008 [5]. Their paper reaffirmed MLA's commitment to research. It also highlighted the needs for librarians to gain a solid knowledge foundation for research and to put evidence-based results into their practice. Perhaps more importantly, it suggested that MLA needed to develop and provide a supportive culture for its members to grow as researchers. Some of the recommended goals were to identify a research agenda, advocate access to and support of library and information science research, foster collaborations, and educate MLA members to conduct better research. The article included a recommendation to develop a Research Section subcommittee that would identify the most important research questions for health sciences librarianship.

### What are the top research questions for the profession?

The Research Section Research Agenda Committee was formed and conducted a brief survey that was sent to more than 800 MLA leaders and more than 200 MLA Research Section members. It asked what they thought were the

most important and answerable questions facing health sciences librarianship. From the survey, 62 questions were identified. The committee used the delphi method, a method for reaching group consensus, and through 2 rounds of voting reduced the 62 to 12 or so top-ranked questions [6], the 2008 list of questions mentioned above. The exact enumeration is subjective because the 12th question consisted of 19 sub-questions.

The top-ranked research questions from the survey can be placed into two broad categories. The first category involves how library services *improve or benefit* health care elements. Respondents identified a need to measure library services that improve patient care, student performance, grants and publications by researchers, budget decisions, "information-seeking" behavior, and consumer health decisions. It is hoped and assumed that, to the respondents, *improve or benefit* meant demonstrating favorable outcomes as called for in evidence-based health care and evidence based-librarianship.

The second category of questions focuses on the *process* of medical and health sciences librarianship. Examples are how we provide information and how the process can be improved; how we can reengineer our skills to meet changing demands; and how we can prevent our own errors. While research on a process can be useful to increase efficiency, many would say outcomes research, which looks at how change affects the end goal, is more valuable. Research on process is more valuable if it includes examination of the impact on target outcomes, and then it becomes outcomes research.

### How has the profession been doing?

In a 2005 *JMLA* editorial, "Building a Body of Evidence," T. Scott Plutchak, AHIP, noted that, over the prior few years, the number of

articles of all kinds submitted to the *JMLA* had increased significantly. He thought it showed an interest in, and the effort of, our colleagues to do research. But as he pointed out, "Nonetheless, a growing number of published reports does not automatically translate into a body of evidence" [7]. He used as an example the clinical librarian programs prominent at that time and further wrote, "despite all of the effort that has been put into developing clinical librarian programs, we are not any closer to demonstrating their value than we were a quarter of a century ago" [7].

"While progress is being made ...there is, however, room for improvement" was the conclusion of Sally Gore and colleagues in their 2009 review that examined research publications in the *Bulletin of the Medical Library Association (BMLA)* and the *JMLA* from 1991 to 2007 [8]. They found more research articles were being published and pointed out that applied and descriptive analytical research were the most common types of research that librarians did and that surveys were the most frequently used methodology. They questioned librarians' usage of surveys and wondered if it was because they are just more comfortable with that method. The authors made the suggestion that "pairing surveys with other methods, such as experimental design," might help to strengthen the research in our field. They also found a trend emerging from the research articles they reviewed. The articles tended to change from those studying the physical operations of libraries to studies of the behavior and opinions of library users.

It is interesting to note that Gore and colleagues used content analysis as their research method and compared what they found to a previous study. This is a good example of building on another study to provide a larger body of evidence. This is something we tend not to do in our field. Replicating and building on others' studies can be a move toward evidence-based research.

### What are the problems facing the profession?

In the words of Ellen Crumley and Denise Koufogiannakis, "While research has always been a minor focus in the profession, moving research into practice is becoming more important and librarians need to consider the issues surrounding research in order to move [evidence-based librarianship] forward" [9].

**Funding.** *The Research Imperative* report in 2007 recommended that MLA's research priorities need to be integrated with the National Library of Medicine (NLM) and National Network of Libraries of Medicine programs to support development of research skills and to provide funding opportunities for research and outcomes studies. Evidence-based library research may require funding that is not readily available to many librarians. Jonathan Eldredge, AHIP, associate professor, School of Medicine and Health Sciences Library and Informatics Center, and coordinator, Evidence Based Practice and Translational Sciences, at the University of New Mexico, believes MLA should advocate to NLM for more financial support to research the identified most-important questions facing health sciences librarianship. Without that, "it will be hard to offer researchers the essential incentives to pursue research" [10].

**Time.** In today's library environment, librarians are faced with multiple job responsibilities. Time is not usually specifically allotted for research. Sally Harvey, AHIP, and Janene Wandersee examined the publication rate of papers and poster abstracts presented at the MLA annual meetings in 2002 and 2003 and found the rate of publication to be on the low end, compared to other medical associations. The most common reason given for non-publication was time restrictions [11]. "It takes time to initiate and carry out research projects, so we might not see much effect yet on [the 2008] top-ranked

research questions," Eldredge said [10].

**Skills and education.** Another recommendation from *The Research Imperative* was to incorporate evidence-based library and information practice "values and skills into all education programs including formal coursework and continuing education" [4]. Michelynn McKnight, AHIP, examined library and information science schools in the United States and determined whether research courses were offered in the curriculum. She found almost all library students have the chance to take a one-semester course in research methods in all US library schools except one. She also found that only half the American Library Association-accredited library programs even required such a course. She stated that it is unrealistic to expect students who take a one-semester course to be skilled in conducting research when they enter their professional positions [12]. Working to incorporate more research training into library school curriculum programs is needed.

Nunzia Giuse, AHIP, FMLA, is assistant vice chancellor for knowledge management and director of one of our most eminent medical libraries, Vanderbilt University's Eskin Biomedical Library. She explained how her library is meeting the library research challenge. She said, "in the last few years, [our] efforts have focused on developing skills that allow for successful integration of librarians into research projects such as the Evidence-based Practice Center, informatics initiatives, patient literacy, and personalized medicine. These new opportunities call for strong participatory roles of our research information specialists, who have benefitted from a learning environment that does not pay [just] lip-service to educating its professionals" [13].

### An action plan

To get down to specifics and to start, we as a profession do not have enough good review articles

on research that has already been conducted. It does not take much funding to conduct a review of the literature on any of the twelve or so topics identified by the 2008 research agenda survey. We need these review articles. As librarians, we certainly have the skills to do this type of research. All it takes is time and effort.

Second, we also need new research projects. Donald A. B. Lindberg and Betsy L. Humphreys, AHIP, FMLA, forecast the role of the medical librarian in 2015. They see librarians "deployed outside of the library to improve quality, reduce risks associated with inefficient or incomplete retrieval of available evidence, and to do community outreach" [14]. They see "librarians working on various healthcare teams, writing grant proposals, serving on institutional review boards, serving as faculty members in evidence based medicine courses and being involved in health literacy programs and community partnership" [14]. We need to study how our new roles will have the greatest benefit. Hopefully, this research will be outcomes oriented, as the era of simply describing a process is a relic of the past, or at least it should be.

Third, we need to get a handle on research procedures. Some librarians may not have the statistical skills needed to interpret results, but most librarians do have access to people with those skills. The opportunity to publish is important among academicians, and they are often very willing to join in and assist with or lead research projects. In addition, MLA offers a myriad of opportunities for all of us to become more involved in the research of our chosen field. The MLA Research Section website at [www.research.mlanet.org](http://www.research.mlanet.org) offers links to research information to help with your research project. The MLA annual meetings offer courses about writing for publication, and each annual meeting has a research mentor session, where you can bring

your research questions and speak with seasoned, published MLA members.

Fourth, we need medical librarians to think about what specific research questions are most important today for the success of our profession. In the fall 2011, there will be a new survey to identify current questions of interest. How different will they be from the questions that topped our 2008 list? You may not be asked to be a direct respondent, but you do have a say. You can influence your MLA leaders, and you can let the MLA Research Section know your research priorities. Go to the Research Section's website to identify members you can speak with or contact me. The Research Section members *will* be respondents, and we will represent you.

With your input and help in identifying the most important topics facing our profession today, we will have a research agenda to keep us abreast of the advances in our field. In addition, with your help researching the important questions from 2008 and documenting what has been published on these subjects and by your venturing into new research topics, we will quickly expand the evidence-based platform for library and health care information practice and ensure success for our profession.

*I. Diane Cooper, MSLS, AHIP, cooperd@mail.nih.gov, Chair, MLA Research Section, and Informationist, NIH Library, National Institutes of Health, Building 10, MSC 1150 Bethesda, MD 20892-1150*

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